



November 12, 2023

Courte Oreilles Lakes Association  
COLA AIS Committee  
Hayward, Wisconsin 54843

**Reference: 2023 Aquatic Plant Management Survey and Report for Lac Courte Oreilles and Little Lac Courte Oreilles.**

Dear Courte Oreilles Lakes Association Members:

The Courte Oreilles Lakes Association (COLA) is a group responsible for the management of Lac Courte Oreilles' Aquatic Invasive Species (AIS), with the species of particular concern being *Myriophyllum spicatum* (Eurasian Milfoil- EWM), and *Potamogeton crispus* (curly-leaf pondweed – CLP) on Lac Courte Oreilles (Lake) and Little Lac Courte Oreilles (Lake).

COLA furnished labor in Pre-Survey mapping, creating Polygons of existing AIS on our 2022 maps and Post-Survey/treatment from Survey Mapping after Chemical Treatments in 2023.

We contracted with our applicator and he provided the tools, chemicals and equipment necessary to perform all operations in connection with the chemical application of herbicides in the locations in Lac Courte Oreilles lake and Little Lac Courte Oreilles. This report provides a summary of observations, conclusions and recommendations for the chemical, mechanical, and diver assisted (DASH) treatment of AIS and nuisance aquatic plant growth from 2023 and recommendations for the upcoming 2024 season.

The cooperation and assistance COLA have received from LCO Conservation Department (tribe) has been instrumental in our efforts to control AIS in our two lakes. COLA simply could not do what we do without their continued invaluable assistance with the mechanical harvester, water testing and advise on all of our efforts to protect these lakes.

## **PROJECT SUMMARY**

This Aquatic Plant Management Report was produced as part of the aquatic plant management activities for Lac Courte Oreilles Lake Association (COLA). The goal of the project was to control stands of CLP and EWM our two invasive species threatening our two lakes. COLA is committed to a healthy native plant population and to encourage growth of native aquatic plants to help improve the health of the lake ecosystem by restoring native habitat, and to improve the recreational and aesthetic value of both lakes.

This is in compliance of our approved (Aquatic Plant Management Plan for 2021-2025). Original dated April 1, 2021. Updated and WDNR approved August 17, 2021. The complete plan can be found on our COLA web site.

## **BACKGROUND**

Lac Courte Oreilles is a 5139-acre lake located in the Towns of Bass Lake and Sand Lake, Sawyer County, Wisconsin near the City of Hayward. Lac Courte Oreilles has a maximum depth of 90 feet and a mean depth of 33 feet. Little Lac Courte Oreilles Lake is 220 acres that receives direct water from Big LCO. The Courte Oreilles Lakes Association is in an active complex watershed that has been managing aquatic plants on the lake through surveys and chemical treatments since 2008. Curly-leaf pondweed, an AIS has been surveyed and treated, primarily in Musky Bay, since 2008 and EWM, an AIS has been treated in both Lakes since 2018.

## **2023 AQUATIC PLANT MANAGEMENT**

COLA contracted NEC, Inc. from Hayward, WI for the 2023 chemical treatment of CLP and EWM.

COLA requested and was granted a successfully issued permit by the Wisconsin Department of Natural Resources (WDNR) as follows: 2 acres in Musky Bay for CLP, 2.79 acres in Stucky Bay to chemically treat up to 52 acres of aquatic invasive species (CLP) and Eurasian Watermilfoil (EWM) Acres for the 2023 season. An additional 18 acres was permitted for mechanical treatment in the lakes.

Before treatments began, a pre-treatment survey was necessary to verify the presence of CLP within the proposed treatment areas outlined in the permit. The survey was completed in both lakes starting in May 2023. CLP was present in Musky Bay, Stucky Bay and Barbertown Bay. Full Pre-Survey (What we wanted to accomplish not the final treatment) results are found in the following section.

COLA spent roughly slightly over 225-man hours on inspections and mapping on both lakes in 2023.

Chemical treatment for CLP, in Musky Bay, with Aquathol K was completed on May 30, 2023. Two (2) acres were treated for CLP in Musky Bay.

In compliance with WDNR regulations, NEC, Inc our applicator kept treatment records and forwarded them to the WDNR.

A copy of the AIS permits can be found on our COLA web site.

## **PRE & POST-TREATMENT AQUATIC PLANT SURVEYS AND ANALYSIS**

Prior to treatment, in 2023, the aquatic plant community of suspected AIS areas was surveyed by AIS mapping Team by COLA This survey at all sample locations was repeated post-treatment between July, Sep and Oct 2023.

We started a dialogue with Wisconsin Department of Natural Resources (WDNR) in late Fall of 2022. We asked for a zoom meeting, which the DNR organized, on Nov 29, 2022. It was well attended by over thirteen people. WDNR, Department of Agriculture, COLA, and the LCO Conservation Department (Tribe).

The purpose of the meeting was to facilitate communication and get our permits approved for Chemical as well as Mechanical Harvest in Big LCO and Little LCO lakes in 2023.

We wanted to avoid the permit problems and delays we encountered, from WDNR in 2022.

Productive, long two and one-half hours meeting. We discussed and were informed on what chemicals would not be allowed for which body of water in 2023 and we proceeded with our permit applications based on that meeting.

## **PRE-SURVEY MAPPING 2022 and CONFIRMED SPRING 2023**

With pre-survey polygons created in fall 2022, we produced an AIS Treatment Plan for 2023 in January and February. Our aggressive plan is dated Feb 8, 2023 and presented below.

The complete spread sheet labeled (LCO AIS Proposed Treatment) can be found in the attachment section at the end of this document. Maps (2023 AIS maps and spreadsheet file can be found on the COLA web suite under AIS)

### **WEST BASIN**

AIS: EWM. Polygons 1-10 Stucky Bay outer West Shoreline. Elto Bar #4, Ring Bar #5,6.

Southwest of Anglers Haven #13 DASH test spot?

Victory Heights #11 &12. Musky Bay #59. Aquastrike Diquat/Endothall with some Mech. Harvest.

AIS: CLP. Musky Bay east end #49-56. Stucky Bay unmapped CLP 0.04 acres. Aquathol K with some Mech. Harvest.

**TOTAL: 9.56 acres**

### **CENTRAL BASIN**

AIS: EWM Polygon #17. AquaStrike Diquat/Endothall 5.2 acres (one of our largest patches).

AIS: EWM Northwest Shoreline #15 AquaStrike Diquat/Endothall. #16 Harvester. Whitefish Creek #21 Harvester.

**TOTAL: 14.62 acres, Acres Ft. 93.1**

#### **EAST BASIN**

AIS: EWM Polygon #23 Anchor Bay AquaStrike Diquat/Endothall 8.5 acres. (Our largest patch mapped)  
Barbertown Trails End Harvester 0.10 acres.

AIS: CLP Polygons #64 and unmapped back corner Barbertown 0.61 acres.

**TOTAL: 9.79 acres**

#### **LITTLE LCO**

AIS: EWM Entrance Polygon #24 AquaStrike Diquat/Endothall 0.50 acres. #24 Hand pull.

AIS: EWM Snowshoe Bay polygons #45-47 AquaStrike Diquat/Endothall.

AIS: EWM North East Shoreline #31 2.21 acres test patch for ProCellacor EC.

AIS: Lower/South small patches #34-44 & 48 Harvester.

**TOTAL: 16.62 Acres**

**GRAND TOTAL FY2023 50.59 acres (Both Lakes)**

Summary:

Harvester 7.92 acres

Hand Pull 2.21 acres

DASH test 0.32 acres

Herbicide. 40.14 acres

**2022 AIS Map** (for comparing to what was proposed to 2023 results)



### COLA AIS Grant 2023

COLA filled out a WDNR AIS Grant Request and was awarded, our “AIS” grant in February, our grant is for \$ 150,000.00 and our grant started March 15, 2023. Grant runs for 2023 and 2024.

COLA hands out to lake users that are launching boats by the clean boat monitor. A handout 5X7 card was developed. Cards list maps of AIS via a linked QR code. A link is also included to a web reporting form. COLA works with our contractor monitoring Clean Boat initiative at the Chicago Boat Landing during weekends. COLA with a grant from the WDNR installed a new camera system at the Chicago boat landing. The new system “Internet-Landing Inspection Device Sensor” (I-LIDS) recorded and monitored over 15,000. boat launching in 2023.

In late fall November 2022, APM experts (Tyrolt), COLA (Umland), WDNR (Van Egeren) and other members of COLA met with WDNR on proposed 2023 efforts moving forward. It was decided we would move our full lake point intercept survey for both lakes to 2025 and possibly in 2024.

Initial permits were prepared in March using Diquat in Big LCO for Anchor Bay, Musky Bay, Chicago Bay, Ashland Bay, Stucky Bay and the West Basin.

On June 12, WDNR approved our chemical permit for Big LCO. Only three areas were approved for chemically treating in 2023. Two areas specifically were denied Ashland Bay and the west basin area of Chicago Bay.

Two areas, the only areas we completed treatment, were scheduled. Chicago Bay and Anchor Bay. They were treated starting in Chicago Bay June 19<sup>th</sup>. With Anchor Bay the following day.

Early preliminary reports have been very positive. We eliminated a large number of plants, clumps from our largest EWM patch in Chicago Bay. Similarly, in Anchor Bay we have reports of a very successful equal elimination of EWM in that Bay. We worked very hard with permitting, chemical selection and our applicator did an outstanding job. Proving that chemical application to control EWM and CLP has and is working for our lake. However, late season mapping, and review of areas treated showed a regrowth of EWM in a couple of areas. It was reported by volunteers that some acres seemed to increase. Mapping needed next spring to verify where we are in these two important bays.

We chemically treated the AIS “Curley Leaf Pondweed” (CLP) the last week of May. Our permit approved letting us treat Musky Bay as a separate body of water and using Aquathol K a specific chemical approved for CLP. Our pre-survey was difficult due to water clarity issues. We have gone from over 90+ acres fifteen years ago to under 2 acres in 2023. This year’s treatment needs to be evaluated next spring, but early reports indicate we had a successful treatment plan for CLP in Musky Bay in 2023. However, our applicator reported possible sighting of EWM in the southwest shore of Musky Bay.

## **LITTLE LCO**

Originally, in little LCO we worked on a different permit using Diquat in numerous areas with a test case of using ProCellacor EC on EWM. Our permit for Little LCO was put on hold in late April over concern of wild rice and a label problem with proposed ProCellacor EC. The matter was referred to waiting a June GLIFWC meeting which would evaluate our request. No results were ever published to COLA and the WDNR denied COLA a permit using ProCellacor EC. Our applicator and an APM expert advised us that there should be no effect on wild rice. DNR Dehl suggested alternative 2-4D amine and a new permit was prepared and submitted. Due to the large area to be treated in the 220 acres lake, an additional review would be necessary with a GLIFWC meeting. The delay of treatment dragged into July, which is late for optimum effectiveness. Our local DNR biologists recommended we reduce the acreages. COLA did, and the permit was finally approved, July 10, within a day. We Chemically treated July 24-25.

The following volunteer report on visual survey Fall 2023 as follows.

“I kayak-checked Snowshoe Bay and found it very reduced/cleared of EWM. I (surveyed) down in the water as it had been a nice bright day. Not only did the EWM appear to be knocked down, but the native plants, appeared unphased. Still thick, large areas of lily-pads, areas of clasping-leaf, areas were also discovered.

Also checked the northern shore of the lake (along Thoroughfare Road). The setup there was to treat from the NE corner along the shoreline but NOT all the way. There was a cut-off of herbicide use about halfway (it had been clearly marked with the signs). The eastern half treated with herbicide appeared cleared and much improved. The western half, starting right where the cut-off of application had been, had a lot of EWM up to the surface even though we’d (previously, this year) used the Eco Harvester on that shoreline. The difference was striking where the herbicide had been applied, versus where not.”  
Little LCO needs a pre-survey inspection next year to evaluate the effectiveness of treatments this year.

## **MECHANICAL HARVEST**

Permits were prepared in February and received before the grant period, March 15, started.

Harvester was used 5 times. Once in Musky Bay for approx. 1 acer of CLP, and 5-6 acres of EWM in Little LCO in the middle of June. Harvester results were not encouraging in Little LCO in 2023. Our APM expert (Tyrolt) recommended we suspend all Mechanical Harvesting after the middle of June over fragmentation concerns and we did. Additionally, COLA and the LCO Conservation Department (Tribe) have worked together for decades and their assistants cannot be overstated. They, the tribe, have provided equipment and labor in Mechanical Harvesting.

## **DIVER ASSISTED SUCTION HARVESTING (DASH)**

We interviewed a few vendors and consulted with other lake associations who use this method. Our APM expert (Tyrolt) did not recommend moving forward. There was some disagreement within our own COLA committee, but it was decided to table this test and relook at it in spring 2024.

## **Mapping Results**

All previous areas, in big LCO, were mapped and completed for 2023. Little LCO was not detailed due to inclement weather and only visual survey was conducted. It is assumed that EWM acers increased and needs to be verified spring of 2024.

## **Mapping Results Fall of 2023**

### Central Basin:

Chicago Bay north shore. After treatment looked very positive. September mapping revealed an aggressive return of EWM. Deeper water below 5-6 feet showed a more aggressive return of AIS. Further from shore the return was worse. As, expected, out from the WDNR landing has a bad patch and has expanded. White Fish Bay, which wasn't treated, showed very little change.

### East Basin:

Anchor Bay. No EWM observed right after treatment. September mapping showed widespread, expanded return. Estimates indicate the same amount returned in the deeper areas. North of Anchor Bay toward Barbertown saw some new patches that need to be mapped next spring.

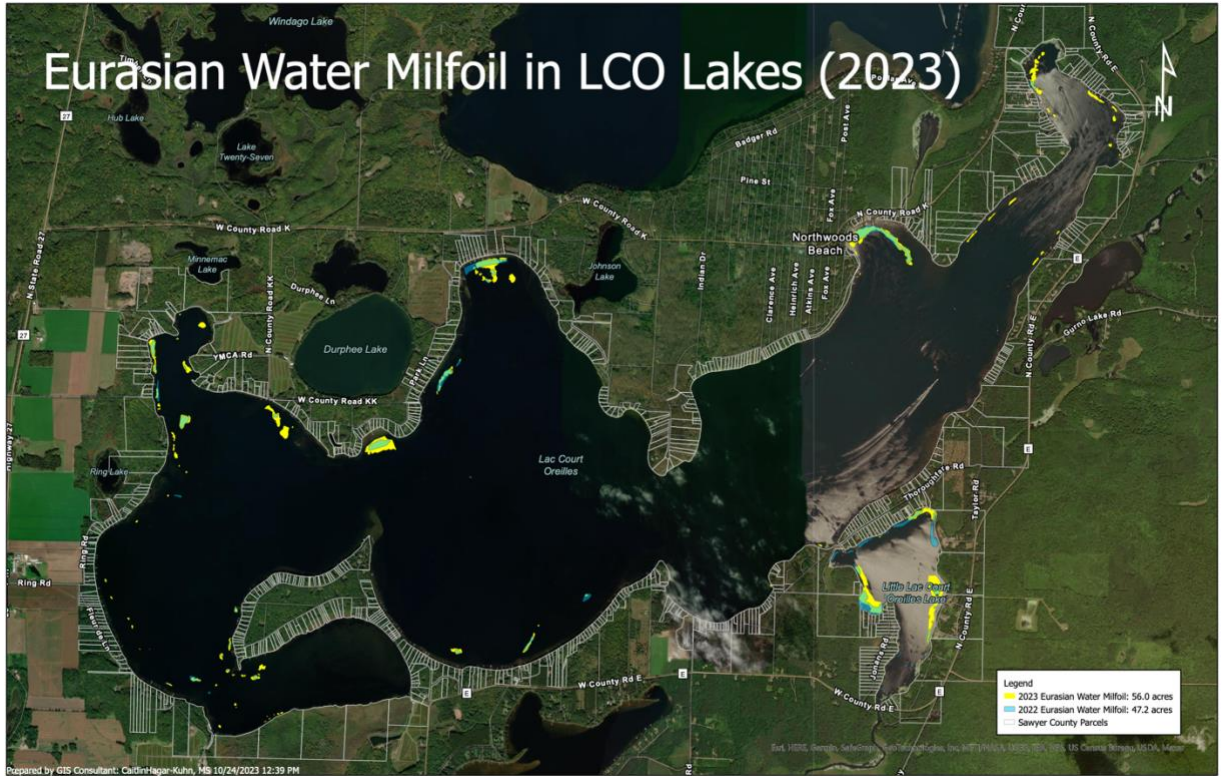
Barbertown Bay. Trails End saw lots of new thick growth around their docks and toward the northern shoreline. As mapped from previous years good native growth mixed in with AIS. CLP seems to be minimal compared to previous years.

Blue Baker Bay showed a new small patch of EWM previously unrecorded. Needs mapping next spring.

### Little LCO:

Visibility, weather conditions hampered complete mapping for fall of 2023. Aggressive growth noted on northern shore and near the mission. For an unknown reason, EWM in Little LCO appears thicker and more emerging than we have observed in the big lake. As previously noted, there was obvious differences in areas that were chemically treated versus the areas that weren't. Mechanical harvest was aggressive early in the season and volunteers reported that the mechanical harvest did not appear to be very successful in 2023.

# Eurasian Water Milfoil in LCO Lakes (2023)



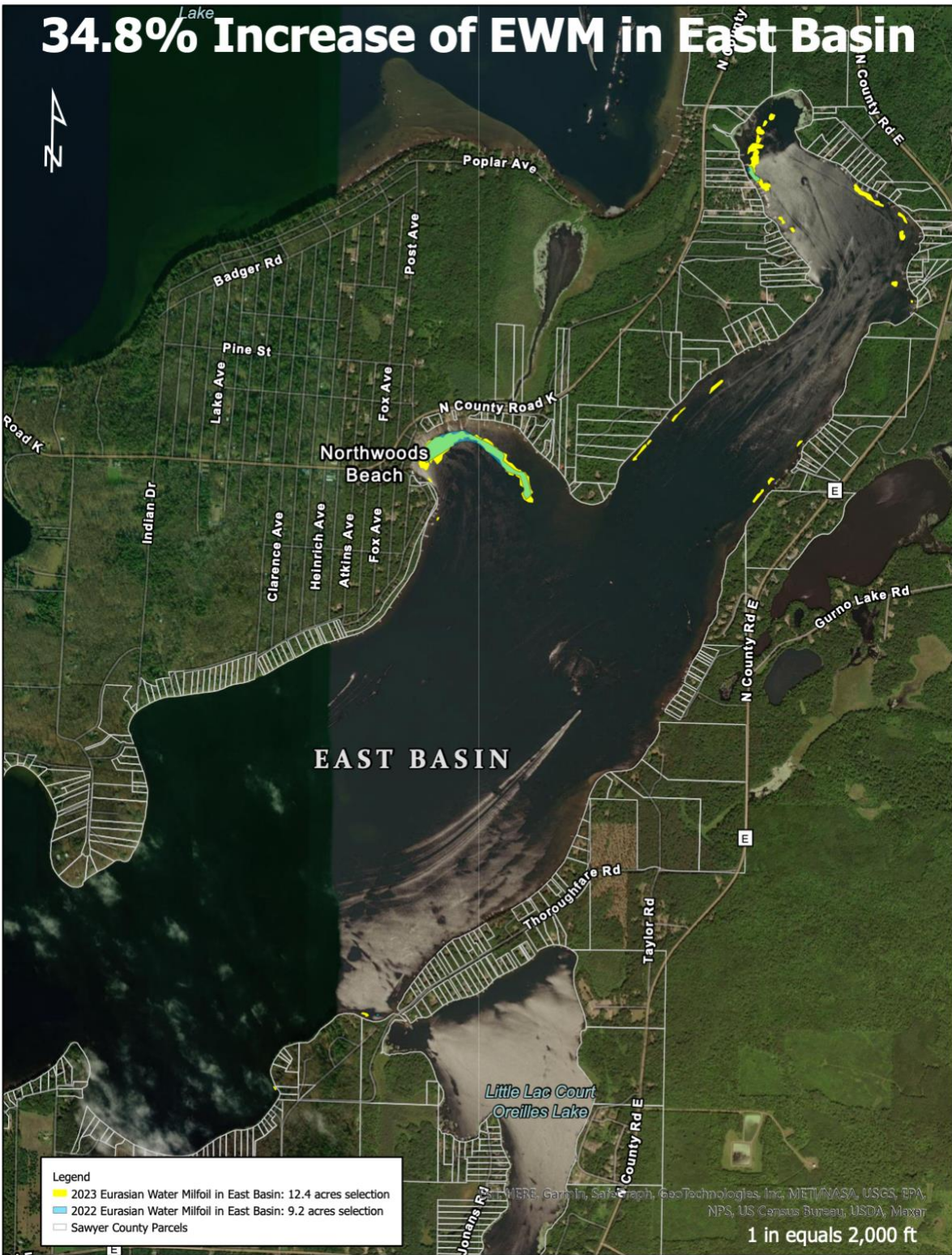




# 60.3% Increase of EWM in West Basin



# 34.8% Increase of EWM in East Basin



# 4.3% Increase of EWM in Little LCO



## **COLA COMMITTEE AIS, RECOMMENDATIONS FOR 2024**

Cola to request both Mechanical and Chemical Permits from the WDNR for both Lac Courte Oreilles Lake and Little Lac Courte Oreilles Lake. Total of four permits, two for each lake.

COLA must initiate a dialogue with the WDNR on how to treat EWM problem in Ashland Bay/NW Shores of Central Basin and guard the small fish/fry spawning beds. COLA believes that both important projects can be accomplished without the exclusion of one or the other.

COLA has initiated a dialogue with the company SePro who makes ProCellacor EC to resolve the ongoing problem of their label and the Department of Agriculture. Currently the SePro label does not allow it to be used in lakes with irrigation of food crops. This has been referred to as a "Label Gap". COLA is asking for the WDNR to engage with the manufacture in an attempt to change the label so it will be allowed to be used in Big and Little LCO in 2024. We have had encouraging dialogue with WDNR asking for their help. Our two lakes need desperately to resolve the issue of treatment timing restrictions from various water users (agriculture and others) on the lake. This must be resolved for COLA to move forward for effective AIS control.

Interview potential contractors and secure a contract for doing a "Whole Lake Full-Point Intercept Aquatic Plant Survey". Establish timing and decide on Fall, after chemical treatment 2024 or move to 2025. This process has already been started in 2023.

COLA should consider and research having paid subcontractors perform the Mechanical Harvesting for both lakes.

Resolve the 2023 problem of securing a permit to chemically treat EWM and then having the WDNR place our approved efforts on hold. The WDNR hold was the result of a disagreement between the agriculture interests and the need for COLA to control AIS expansion. We were on schedule to Chemically treat in Stucky Bay, Elto Bar and the West Basin. This was going to be the end of our approved treatment plan for 2023. However, we were restricted by the cranberry/agriculture interests without justification. All chemical treatment of AIS was terminated, with WDNR approval. Within these areas of EWM in Stucky Bay, Elko Bar and the West Basin proper no treatment was allowed. COLA had to absorb a \$ 4,608.00 loss in chemical expense in 2023.

This problem, with who has the authority to cancel and give reasons for cancelation, must be resolved for COLA to move forward in 2024. (See below proposed WDNR meeting).

Similar to late 2022 we are trying to set up a meeting with the WDNR anywhere, anytime to work out a proposed plan to tackle our mounting AIS problems and efforts for 2024. Some progress has been indicated from WDNR so we are optimistic we will be able to chemically treat our AIS in Lac Courte Oreilles Lakes moving forward.

The problem of issues relating to Labeling and ProCellacor EC use must be addressed in 2024.

Re-evaluate need and consider a DASH testing pilot for 2024. Polygon # 13 (near Anglers Haven or White Fish creek discharge needs to be considered.

Consider that the underutilized/budgeted GIS and DASH expenses be re-budgeted to Chemical Expenses.

COLA  
AIS committee

